=> fil reg; d ide
FILE 'REGISTRY' ENTERED AT 09:55:55 ON 15 JAN 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 13 JAN 2004 HIGHEST RN 637299-19-5
DICTIONARY FILE UPDATES: 13 JAN 2004 HIGHEST RN 637299-19-5

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

L12 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 9005-25-8 REGISTRY
CN **Starch (8CI, 9CI)** (CA INDEX NAME)
OTHER NAMES:
CN .alpha.-Starch
CN Absorbo HP
CN Ace P 320
CN Actobody TP 2
CN Aeromyl 115
CN Agglofroid 009
CN Agglofroid 313E
CN Allbond 200
CN Alphajel KS 37
CN Alstar B
CN Alstar H
CN Amaizo 100
CN Amaizo 213
CN Amaizo 310
CN Amaizo 5
CN Amaizo 71
CN Amaizo 710
CN Amaizo W 13
CN Amalean I-A 2131
CN Amalean I-A 7081
CN Amicoa
CN Amidex 3005
CN Amidex 4001
CN Amido-STA 1500
CN Amigel
CN Amigel 12014
CN Amigel 30076
CN Amijel VA 160
CN Amilys 100
CN Amycol HF
CN Amycol W
CN Amylogum
CN Amylomaize starch

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CN Amylomaize VII
CN Amylon 70
CN Amylose, mixt. with amylopectin
CN Amylox 1
CN Amylum
CN Amyren 14
CN Amyren 71
CN Amysil K
CN Amyzet TK
CN Argo Corn Starch
CN Arrowroot starch
CN AS 225
CN AS 225 (starch)
CN Atomyl
CN Aytex P
CN B 200
CN B 200 (polysaccharide)
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DEF A high-polymeric carbohydrate material primarily composed of amylopectin and amylose. It is usually derived from cereal grains such as corn, wheat and sorghum, and from roots and tubers such as potatoes and tapioca. It includes starch which has been pregelatinized by heating in the presence of water.
DR 9057-05-0, 53262-79-6, 131800-97-0, 60496-95-9, 67674-80-0, 75138-75-9, 75398-82-2, 154636-77-8, 152987-55-8, 85746-25-4, 42616-76-2, 53112-52-0
MF Unspecified
CI COM, MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
66860 REFERENCES IN FILE CA (1907 TO DATE)
6517 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
66952 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d ide

L27 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 9037-22-3 REGISTRY
CN **Amylopectin (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Amaizo 839
CN Amioca
CN Amioca WCS
CN C*Pharm 12018
CN Cato 225
CN Cato 240
CN Cato 270
CN Cerestar SF 04201
CN Farinex WM 85
CN Honen Alpha Waxy Starch
CN Kosol
CN Pectin, amylo
CN Starch, waxy
CN Ultraamylopectin N

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CN Ultrasperse A
CN Waxilys
CN Waxilys 100
CN Waxilys 200
CN Waxy 7350
CN Waxy Alpha Y
CN Waxy corn starch
CN Waxy maize starch
CN Waxy starch
CN WCS
DR 9050-86-6, 189047-96-9
MF Unspecified
CI PMS, COM, MAN
PCT Manual registration, Polyother, Polyother only
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, PIRA, PROMT, TOXCENTER, TULSA, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2957 REFERENCES IN FILE CA (1907 TO DATE)
208 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2965 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Searched by Barb O'Bryen, STIC 308-4291

```
=> fil capl; d que 19
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FILE COVERS 1907 - 15 Jan 2004  VOL 140 ISS 3
FILE LAST UPDATED: 14 Jan 2004  (20040114/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE


L1            28 SEA FILE=CAPLUS ABB=ON  GUSTAVSSON N?/AU
L2           140 SEA FILE=CAPLUS ABB=ON  JONSSON M?/AU
L6            41 SEA FILE=CAPLUS ABB=ON  JOENSSON M?/AU
L7             4 SEA FILE=CAPLUS ABB=ON  BERDEN P?/AU
L8           101 SEA FILE=CAPLUS ABB=ON  LAAKSO T?/AU
L9             2 SEA FILE=CAPLUS ABB=ON  L7 AND (L1 OR L2 OR L6 OR L8)


=> d ibib ab 19 1-2

L9   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2002:276035  CAPLUS
DOCUMENT NUMBER:          136:296466
TITLE:                    Forming purified starch and microparticles with
                          controlled release of a biologically active substance
INVENTOR(S):              Gustafsson, Nils Ove; Berden, Per;
                          Joensson, Monica; Laakso, Timo;
                          Reslow, Mats
PATENT ASSIGNEE(S):       Bioglan AB, Swed.
SOURCE:                   PCT Int. Appl., 42 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.         KIND  DATE          APPLICATION NO.   DATE
     ---------------    ----  --------      ---------------   --------
     WO 2002028909       A1   20020411      WO 2001-SE2168    20011005
         W:  AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES,
             FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
             MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL,
             TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY,
             KG, KZ, MD, RU
```

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

SE 2000003616	A	20020407	SE 2000-3616	20001006
SE 517422	C2	20020604		
AU 2001094460	A5	20020415	AU 2001-94460	20011005
US 2002045745	A1	20020418	US 2001-970648	20011005
US 2002065411	A1	20020530	US 2001-970795	20011005
US 6616948	B2	20030909		
EP 1325035	A1	20030709	EP 2001-975101	20011005
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003206961	A1	20031106	US 2003-461393	20030616

PRIORITY APPLN. INFO.:

SE 2000-3616	A	20001006
US 2001-260491P	P	20010108
US 2001-970795	A3	20011005
WO 2001-SE2168	W	20011005

AB Prodn. of purified, parenterally administrable starch by washing starch contg. >85% amylopectin to remove surface-localized proteins, lipids and endotoxins, subjecting the starch to a mol. wt. redn. by acid hydrolysis, and optionally removing residual water-sol. proteins.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:276034 CAPLUS
DOCUMENT NUMBER: 136:296465
TITLE: Pharmaceutically acceptable starch
INVENTOR(S): **Gustavsson, Nils Ove; Berden, Per; Joensson, Monica; Laakso, Timo;** Reslow, Mats
PATENT ASSIGNEE(S): Bioglan AB, Swed.
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028908	A1	20020411	WO 2001-SE2163	20011005

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

SE 2000003616	A	20020407	SE 2000-3616	20001006
SE 517422	C2	20020604		
AU 2001094457	A5	20020415	AU 2001-94457	20011005
US 2002045745	A1	20020418	US 2001-970648	20011005
US 2002065411	A1	20020530	US 2001-970795	20011005
US 6616948	B2	20030909		
EP 1325034	A1	20030709	EP 2001-975098	20011005
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003206961	A1	20031106	US 2003-461393	20030616

PRIORITY APPLN. INFO.:

SE 2000-3616	A	20001006

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US 2001-260491P P 20010108
US 2001-970795 A3 20011005
WO 2001-SE2163 W 20011005

AB Prodn. of purified, parenterally administrable starch is accomplished by washing starch contg. more than 85% amylopectin in order to remove surface-localized proteins, lipids and endotoxins, dissolving the starch in aq. medium, mol. wt. redn. by shearing, and optionally removal of residual water-sol. proteins, preferably by anion exchange chromatog.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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```
=> fil embase; d que l63; d que l64; d que l66; d que l71
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L57          414 SEA FILE=EMBASE ABB=ON  AMYLOPECTIN/CT
L58        28620 SEA FILE=EMBASE ABB=ON  MOLECULAR WEIGHT/CT
L61           16 SEA FILE=EMBASE ABB=ON  L57/MAJ AND L58
L62      3063469 SEA FILE=EMBASE ABB=ON  DRUG
L63            6 SEA FILE=EMBASE ABB=ON  L61 AND L62
```

text search

```
L57          414 SEA FILE=EMBASE ABB=ON  AMYLOPECTIN/CT
L59          841 SEA FILE=EMBASE ABB=ON  AMINO ACID#(3A)NITROGEN#
L64            0 SEA FILE=EMBASE ABB=ON  L59 AND L57


L57          414 SEA FILE=EMBASE ABB=ON  AMYLOPECTIN/CT
L65         1801 SEA FILE=EMBASE ABB=ON  PERCENT(5A)WEIGHT
L66            0 SEA FILE=EMBASE ABB=ON  L65 AND L57


L57          414 SEA FILE=EMBASE ABB=ON  AMYLOPECTIN/CT
L67         2706 SEA FILE=EMBASE ABB=ON  MICROPARTIC?
L71            0 SEA FILE=EMBASE ABB=ON  L57 AND L67

=> file medline drugu pascal jic biotechno biotechds biosis toxcenter wpids
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FILE 'DRUGU' ENTERED AT 11:26:05 ON 15 JAN 2004
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FILE 'WPIDS' ENTERED AT 11:26:05 ON 15 JAN 2004

=> d que l103; d que l102; d que l111

L91 6402 SEA AMYLOPECTIN#
L95 7838 SEA AMINO ACID#(5A) NITROGEN#
L99 22884 SEA PERCENT(5A) WEIGHT
L100 10067967 SEA PHARMAC? OR DRUG#
L103 5 SEA L91 AND (L95 OR L99) AND L100

L91 6402 SEA AMYLOPECTIN#
L96 144458 SEA ENDOTOXIN# OR ENDO(A) TOXIN#
L100 10067967 SEA PHARMAC? OR DRUG#
L102 8 SEA L91 AND L96 AND L100

L91 6402 SEA AMYLOPECTIN#
L92 176441 SEA STARCH##
L93 678374 SEA MOLEC?(W) WEIGHT OR MW
L98 24670 SEA MICROPARTIC? OR MICRO PARTIC?
L100 10067967 SEA PHARMAC? OR DRUG#
L109 108292 SEA (LOW OR REDUC? OR DECREAS?)(1A) L93
L111 13 SEA L91 AND L109 AND L92 AND (L100 OR L98)

=> s l103 or l102 or l111

L119 18 L103 OR L102 OR L111

=> fil capl; d que l31; d que l36; d que l54; d que l35; d que l41; d que l48; d que l50

FILE 'CAPLUS' ENTERED AT 11:26:11 ON 15 JAN 2004

FILE COVERS 1907 - 15 Jan 2004 VOL 140 ISS 3
FILE LAST UPDATED: 14 Jan 2004 (20040114/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

L10 74880 SEA FILE=CAPLUS ABB=ON STARCH?/OBI

Searched by Barb O'Bryen, STIC 308-4291

```
L12           1 SEA FILE=REGISTRY ABB=ON  STARCH/CN
L13       67092 SEA FILE=CAPLUS ABB=ON  L12
L14      195587 SEA FILE=CAPLUS ABB=ON  PHARMACEUT?/OBI
L16      104891 SEA FILE=CAPLUS ABB=ON  MW/OBI OR MOLEC?/OBI(W)WEIGHT/OBI
L17       20504 SEA FILE=CAPLUS ABB=ON  KDA/OBI OR KILODALTON#/OBI OR DALTON#/O
                BI
L19       18129 SEA FILE=CAPLUS ABB=ON  HIGH/OBI(W)L16
L27           1 SEA FILE=REGISTRY ABB=ON  AMYLOPECTIN/CN
L28        2966 SEA FILE=CAPLUS ABB=ON  L27
L29        3477 SEA FILE=CAPLUS ABB=ON  AMYLOPECTIN#/OBI
L31           3 SEA FILE=CAPLUS ABB=ON  L14 AND (L10 OR L13) AND (L28 OR L29)
                AND (L16 OR L17) NOT L19


L10       74880 SEA FILE=CAPLUS ABB=ON  STARCH?/OBI
L12           1 SEA FILE=REGISTRY ABB=ON  STARCH/CN
L13       67092 SEA FILE=CAPLUS ABB=ON  L12
L21        3242 SEA FILE=CAPLUS ABB=ON  AMINO ACID#/OBI(3A)NITROGEN#/OBI
L27           1 SEA FILE=REGISTRY ABB=ON  AMYLOPECTIN/CN
L28        2966 SEA FILE=CAPLUS ABB=ON  L27
L29        3477 SEA FILE=CAPLUS ABB=ON  AMYLOPECTIN#/OBI
L36           0 SEA FILE=CAPLUS ABB=ON  (L10 OR L13) AND (L28 OR L29) AND L21


L10       74880 SEA FILE=CAPLUS ABB=ON  STARCH?/OBI
L12           1 SEA FILE=REGISTRY ABB=ON  STARCH/CN
L13       67092 SEA FILE=CAPLUS ABB=ON  L12
L27           1 SEA FILE=REGISTRY ABB=ON  AMYLOPECTIN/CN
L28        2966 SEA FILE=CAPLUS ABB=ON  L27
L29        3477 SEA FILE=CAPLUS ABB=ON  AMYLOPECTIN#/OBI
L53         309 SEA FILE=CAPLUS ABB=ON  PERCENT/OBI(3A)WEIGHT/OBI
L54           0 SEA FILE=CAPLUS ABB=ON  L53 AND (L10 OR L13) AND (L28 OR L29)


L10       74880 SEA FILE=CAPLUS ABB=ON  STARCH?/OBI
L12           1 SEA FILE=REGISTRY ABB=ON  STARCH/CN
L13       67092 SEA FILE=CAPLUS ABB=ON  L12
L14      195587 SEA FILE=CAPLUS ABB=ON  PHARMACEUT?/OBI
L16      104891 SEA FILE=CAPLUS ABB=ON  MW/OBI OR MOLEC?/OBI(W)WEIGHT/OBI
L17       20504 SEA FILE=CAPLUS ABB=ON  KDA/OBI OR KILODALTON#/OBI OR DALTON#/O
                BI
L19       18129 SEA FILE=CAPLUS ABB=ON  HIGH/OBI(W)L16
L25     1811268 SEA FILE=CAPLUS ABB=ON  PHARMAC?/SC,SX
L27           1 SEA FILE=REGISTRY ABB=ON  AMYLOPECTIN/CN
L28        2966 SEA FILE=CAPLUS ABB=ON  L27
L29        3477 SEA FILE=CAPLUS ABB=ON  AMYLOPECTIN#/OBI
L34        8538 SEA FILE=CAPLUS ABB=ON  MICROPARTIC?/OBI
L35           2 SEA FILE=CAPLUS ABB=ON  (L14 OR L25) AND (L10 OR L13) AND (L28
                OR L29) AND (L16 OR L17) AND L34 NOT L19


L10       74880 SEA FILE=CAPLUS ABB=ON  STARCH?/OBI
L12           1 SEA FILE=REGISTRY ABB=ON  STARCH/CN
L13       67092 SEA FILE=CAPLUS ABB=ON  L12
L27           1 SEA FILE=REGISTRY ABB=ON  AMYLOPECTIN/CN
L28        2966 SEA FILE=CAPLUS ABB=ON  L27
L29        3477 SEA FILE=CAPLUS ABB=ON  AMYLOPECTIN#/OBI
L38       73945 SEA FILE=CAPLUS ABB=ON  TOXIN#/OBI
L39     1257441 SEA FILE=CAPLUS ABB=ON  PROTEIN#/OBI
```

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L40        3515 SEA FILE=CAPLUS ABB=ON  (L38 OR L39)(L)REM/RL
L41           4 SEA FILE=CAPLUS ABB=ON  L40 AND (L10 OR L13) AND (L28 OR L29)
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Rule REM = Removal or Disposal

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L10       74880 SEA FILE=CAPLUS ABB=ON  STARCH?/OBI
L12           1 SEA FILE=REGISTRY ABB=ON  STARCH/CN
L13       67092 SEA FILE=CAPLUS ABB=ON  L12
L14      195587 SEA FILE=CAPLUS ABB=ON  PHARMACEUT?/OBI
L25     1811268 SEA FILE=CAPLUS ABB=ON  PHARMAC?/SC,SX
L27           1 SEA FILE=REGISTRY ABB=ON  AMYLOPECTIN/CN
L28        2966 SEA FILE=CAPLUS ABB=ON  L27
L29        3477 SEA FILE=CAPLUS ABB=ON  AMYLOPECTIN#/OBI
L34        8538 SEA FILE=CAPLUS ABB=ON  MICROPARTIC?/OBI
L42      158176 SEA FILE=CAPLUS ABB=ON  GEL#/OBI OR GELLING/OBI
L46      140677 SEA FILE=CAPLUS ABB=ON  DRUG DELIVERY SYSTEMS+OLD/CT
L48           6 SEA FILE=CAPLUS ABB=ON  (L10(L)L28 OR L13(L)L29) AND (L14 OR
                L25) AND L46 AND (L34 OR L42)
```

```
L10       74880 SEA FILE=CAPLUS ABB=ON  STARCH?/OBI
L12           1 SEA FILE=REGISTRY ABB=ON  STARCH/CN
L13       67092 SEA FILE=CAPLUS ABB=ON  L12
L27           1 SEA FILE=REGISTRY ABB=ON  AMYLOPECTIN/CN
L28        2966 SEA FILE=CAPLUS ABB=ON  L27
L29        3477 SEA FILE=CAPLUS ABB=ON  AMYLOPECTIN#/OBI
L34        8538 SEA FILE=CAPLUS ABB=ON  MICROPARTIC?/OBI
L42      158176 SEA FILE=CAPLUS ABB=ON  GEL#/OBI OR GELLING/OBI
L49        7705 SEA FILE=CAPLUS ABB=ON  ENZYMAT?/OBI
L50           1 SEA FILE=CAPLUS ABB=ON  (L34 OR L42)(L)L49 AND (L10 OR L13)
                AND (L28 OR L29)
```

```
=> s (l31 or l35 or l41 or l48 or l50) not l9

L120         13 (L31 OR L35 OR L41 OR L48 OR L50) NOT L9
```

previously granted as divisional Application

```
=> dup rem l120,l63,l119
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PROCESSING COMPLETED FOR L120
PROCESSING COMPLETED FOR L63
PROCESSING COMPLETED FOR L119
L121            30 DUP REM L120 L63 L119 (7 DUPLICATES REMOVED)
                   ANSWERS '1-13' FROM FILE CAPLUS
                   ANSWERS '14-19' FROM FILE EMBASE
                   ANSWER '20' FROM FILE MEDLINE
                   ANSWER '21' FROM FILE DRUGU
                   ANSWER '22' FROM FILE PASCAL
                   ANSWER '23' FROM FILE BIOTECHNO
                   ANSWERS '24-25' FROM FILE BIOSIS
                   ANSWERS '26-27' FROM FILE TOXCENTER
                   ANSWERS '28-30' FROM FILE WPIDS

=> d ibib ab hitrn 1-13; d ibib ab 14-30; fil hom

L121 ANSWER 1 OF 30  CAPLUS  COPYRIGHT 2004 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2002:275775  CAPLUS
DOCUMENT NUMBER:          136:284479
TITLE:                    A controlled-release starch microparticle
                          for parenteral administration
INVENTOR(S):              Reslow, Mats; Bjoern, Soeren; Drustrup, Joern;
                          Gustafsson, Nils Ove; Joensson, Monica; Laakso, Timo
PATENT ASSIGNEE(S):       Bioglan AB, Swed.
SOURCE:                   PCT Int. Appl., 69 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.         KIND  DATE          APPLICATION NO.   DATE
     ---------------    ----  --------      ---------------   --------
     WO 2002028375       A1   20020411      WO 2001-SE2165    20011005
         W:  AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES,
             FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
             MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL,
             TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY,
             KG, KZ, MD, RU
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     SE 2000003614       A    20020407      SE 2000-3614      20001006
     SE 517610           C2   20020625
     AU 2001094459       A5   20020415      AU 2001-94459     20011005
     EP 1328258          A1   20030723      EP 2001-975100    20011005
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     US 2002102311       A1   20020801      US 2002-970792    20020110
PRIORITY APPLN. INFO.:                    SE 2000-3614      A  20001006
                                          US 2001-260495P   P  20010108
                                          WO 2001-SE2165    W  20011005
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Searched by Barb O'Bryen, STIC 308-4291

AB A parenterally administrable, biodegradable microparticle prepn., preferably composed of amylopectin-contg. starch is described. The prepn. contains a biol. active substance which, during the first 24 h after injection, exhibits a release of the active substance that is less than 25% of the total release, detd. from a concn.-time curve in the form of the ratio between the area under the curve during the said first 24 h and the total area under the curve in question. For example, bovine serum albumin (BSA) was immobilized with high loading in starch microspheres produced from highly branched, sheared starch. A starch soln. (40%) of sheared, highly branched starch with an av. mol. wt. of 1600 kDa, a soln. of PEG 20,000 Da (38%) and a soln. of BSA (14%) were prepd. in 50 mM sodium phosphate, pH 8.3 and spray dried. The protein yield was 94%, the starch yield 89%, and the loading obtained was 10%. The mean particle size was 98 .mu.m and with less than 10% of the distribution below 35 .mu.m. By incubation with .alpha.-amylase or .alpha.-amylase and amyloglucosidase the microspheres were fully dissolved within 48 h.

IT **9037-22-3**, Amylopectin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**starch** contg.; prepn. of controlled-release, parenterally administrable **starch microparticle** prepn.)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 2 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2002:275771 CAPLUS
DOCUMENT NUMBER: 136:299676
TITLE: Vaccine composition comprising an immunologically active substance embedded in **microparticles** consisting of **starch** with reduced **molecular weight**
INVENTOR(S): Joensson, Monica; Larsson, Karin; Gustafsson, Nils Ove; Laakso, Timo; Reslow, Mats
PATENT ASSIGNEE(S): Bioglan AB, Swed.
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028371	A1	20020411	WO 2001-SE2169	20011005
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
SE 2000003615	A	20020407	SE 2000-3615	20001006
SE 517421	C2	20020604		
AU 2001092529	A5	20020415	AU 2001-92529	20011005
US 2002044976	A1	20020418	US 2001-970793	20011005
EP 1322290	A1	20030702	EP 2001-972895	20011005
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002098203	A1	20020725	US 2002-970794	20020110
US 2003211167	A1	20031113	US 2003-461445	20030616

PRIORITY APPLN. INFO.: SE 2000-3615 A 20001006

Searched by Barb O'Bryen, STIC 308-4291

US	2001-260455P	P	20010108
US	2001-970793	A3	20011005
WO	2001-SE2169	W	20011005

AB A vaccine compn. is disclosed which comprises an immunol. active substance embedded in microparticles essentially consisting of starch having an amylopectin content exceeding 85 % by wt., of which at least 80 % by wt. has an av. mol. wt. within the range of 10-10,000 kDa. A process for prepg. such vaccine compn. is also disclosed.

IT **9005-25-8P, Starch**, biological studies
9037-22-3P, Amylopectin
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PUR (Purification or recovery); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(vaccine compn. comprising an immunol. active substance embedded in **microparticles** consisting of **starch** with reduced **mol. wt.**)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 3 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2002:275770 CAPLUS
DOCUMENT NUMBER: 136:299729
TITLE: Biodegradable controlled release **microparticles** containing **amylopectin** -based **starch** of reduced **molecular weight**
INVENTOR(S): Joensson, Monica; Gustavsson, Nils Ove; Laakso, Timo; Reslow, Mats
PATENT ASSIGNEE(S): Bioglan AB, Swed.
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028370	A1	20020411	WO 2001-SE2164	20011005
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
SE 2000003615	A	20020407	SE 2000-3615	20001006
SE 517421	C2	20020604		
AU 2001094458	A5	20020415	AU 2001-94458	20011005
US 2002044976	A1	20020418	US 2001-970793	20011005
EP 1322291	A1	20030702	EP 2001-975099	20011005
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002098203	A1	20020725	US 2002-970794	20020110
US 2003211167	A1	20031113	US 2003-461445	20030616

PRIORITY APPLN. INFO.:	SE	2000-3615	A 20001006
	US	2001-260455P	P 20010108
	US	2001-970793	A3 20011005
	WO	2001-SE2164	W 20011005

AB A process for producing parenterally administrable microparticles, in

which an at least 20% by wt. aq. soln. of purified amylopectin-based starch of reduced mol. wt. is prepd., the soln. is combined with a biol. active substance, an emulsion of starch droplets is formed in an outer phase of polymer soln., the starch droplets are made to gel, and the gelled starch particles are dried. A release-controlling shell is optionally also applied to the particles. Microparticles which essentially consist of the starch, have an amino acid content of <50 .mu.g and have no covalent chem. crosslinking. Thus, starch microspheres contg. BSA were produced from highly branched starch with av. mol. wt. of 1930 kDA. The starch soln. was mixed with PEG and the mixt. was administered s.c. and i.m. to rats. The microspheres were biodegraded rapidly within 1 wk, and the tissue is rapidly normalized.

IT **9037-22-3, Amylopectin**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Cerestar SF 04201; biodegradable controlled release **microparticles** contg. reduced **mol.-wt amylopectin**-based **starch**)

IT **9005-25-8, Starch**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biodegradable controlled release **microparticles** contg. reduced **mol.-wt amylopectin**-based **starch**)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 4 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:242150 CAPLUS
DOCUMENT NUMBER: 138:276257
TITLE: Controlled release compositions containing opioids and polymers
INVENTOR(S): Fischer, Gina; Bar-Shalom, Daniel; Slot, Lillian; Jensen, Christine
PATENT ASSIGNEE(S): Egalet A/S, Den.
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003024430	A1	20030327	WO 2002-DK619	20020923

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DK 2001-1376 A 20010921

AB A pharmaceutical compn. for controlled release of an active substance. The active substance is released into an aq. medium by erosion of at least one surface of the compn. The compn. comprises a matrix contg. polymer or a mixt. of polymers, an active substance and, optionally, 1 or more excipients, and a coating. A zero order drug release is desirable. The matrix typically comprises PEG and the active substance is typically an opioid such as morphine or a glucuronide. The coating comprises a first cellulose deriv. which is substantially insol. in the aq. medium and at

least 1 of a second cellulose deriv. which is sol. or dispersible in water, a plasticizer, and, a filler. A compn. was prepd. from the following ingredients: PEG-200,000 83.5, and morphine sulfate 16.5% by wt. The coating and the matrix were prepd. as described above. The compn. was 9 mm long and had elliptic formed surfaces. Morphine sulfate (96.65%) was released in 8 h.

IT **9005-25-8, Starch**, biological studies **9037-22-3**
, Amylopectin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(controlled release compns. contg. opioids and polymers)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 5 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:242149 CAPLUS
DOCUMENT NUMBER: 138:276256
TITLE: Controlled release **pharmaceutical** compositions containing polymers
INVENTOR(S): Fischer, Gina; Bar-Shalom, Daniel; Slot, Lillian; Lademann, Anne-Marie; Jensen, Christine
PATENT ASSIGNEE(S): Egalet A/S, Den.
SOURCE: PCT Int. Appl., 105 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003024429	A1	20030327	WO 2002-DK620	20020923

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DK 2001-1377 A 20010921
DK 2002-1044 A 20020703

AB A method for controlling the release of at least one therapeutically, prophylactically and/or diagnostically active substance into an aq. medium by erosion of at least one surface of a pharmaceutical compn. The method comprises adjusting the concn. and/or the nature of the ingredients making up the matrix compn. in such a manner so as to obtain an approx. zero-order release of the drug from the pharmaceutical compn. when subject to an in vitro dissoln. test as described herein. The compn. comprises a matrix compn. contg. a polymer or a mixt. of polymers that may be substantially water sol. and/or cryst., an active substance and, optionally, one or more pharmaceutically acceptable excipients, and a coating. Typical polymers are PEG. The coating comprises a first cellulose deriv. which is substantially insol. in the aq. medium, and at least one of a second cellulose deriv. which is sol. or dispersible in water, a plasticizer, and a filler. The active ingredient may be carvedilol. Stable solid dispersions of active substances having low water soly. are also disclosed. Thus, a compn. contained PEG 64.6, carvedilol 30, and citric acid 5.4% by wt.

IT **9005-25-8, Starch**, biological studies **9037-22-3**
, Amylopectin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(controlled release **pharmaceutical** compns. contg. polymers)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 6 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:757024 CAPLUS
DOCUMENT NUMBER: 139:265766
TITLE: Starch **microparticles** containing a biologically active substance
INVENTOR(S): Reslow, Mats; Jonsson, Monica; Larsson, Karin; Laakso, Timo
PATENT ASSIGNEE(S): Swed.
SOURCE: U.S. Pat. Appl. Publ., 20 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003180371	A1	20030925	US 2002-162674	20020606
WO 2003080033	A1	20031002	WO 2003-SE463	20030320

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:
SE 2002-873 A 20020321
SE 2002-1599 A 20020530

AB A process for producing microparticles, in which an aq. soln. of purified amylopectin-based starch of reduced mol. wt. is prepd., the soln. is combined with biol. active substance, an emulsion of starch droplets is formed in an outer phase of polymer soln., the starch droplets are made to gel, the gelled starch particles are dried, and a release-controlling shell is optionally applied to the particles, wherein at least one buffer substance having the ability of keeping the pH of the produced microparticles above 3 if exposing the microparticles to an aq. environment is added at any stage during the process. Microparticles which essentially consist of this starch, have an amino acid content of less than 50 .mu.g, have no covalent chem. crosslinking and have the activity of keeping the pH above 3 if exposed to a aq. environment. For example, starch microparticles were prepd. from highly branched starch with av. mol. wt. of 530 kDA and polyethylene glycol in histidine buffer (pH 6.4).

IT **9005-25-8**, Starch, biological studies **9037-22-3**, Amylopectin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**amylopectin**-based **starch microparticles** with polymer coating for controlled release of biol. active substances)

L121 ANSWER 7 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:590610 CAPLUS
DOCUMENT NUMBER: 139:122801
TITLE: Bioadhesive compositions containing polysaccharides and carboxylated polymers

Searched by Barb O'Bryen, STIC 308-4291

INVENTOR(S): Ameye, Dieter; Remon, Jean Paul; Foreman, Paul B.; Richardson, Paul H.
PATENT ASSIGNEE(S): Belg.
SOURCE: U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003143277	A1	20030731	US 2002-61622	20020131
WO 2003063839	A1	20030807	WO 2003-US2946	20030131
WO 2003063839	C1	20031113		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-61622 A 20020131

AB The invention provides bioadhesive compn. having increased bioadhesive properties, decreased irritation, and the capacity for higher drug loading. The compns. of the invention comprise intimate mixts. of a polysaccharide and a carboxylated polymer, and optionally also an absorption enhancer. A mixt. of 10% by wt. of Amioca waxy corn starch and 90% water was prepd. as a slurry. The mixt. was heated by injecting steam at a pressure of 2.75 bar and the final starch solids content was 7.74%. A 1% aq. soln. of Carbopol-974P was prepd. and mixed with the starch o obtain the desired ratio of starch to Carbopol (60:40). The soln. mixt. was heated to 40.degree. and spray dried by using a centrifugal wheel atomizer. . The resulting product was a fine, low d., white powder comprising an intimate mixt. of Amioca and Carbopol.

IT **9005-25-8, Starch**, biological studies **9037-22-3**
, Amioca WCS
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bioadhesive compns. contg. polysaccharides and carboxylated polymers)

L121 ANSWER 8 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:391500 CAPLUS
DOCUMENT NUMBER: 136:391006
TITLE: Parenterally administrable **microparticles** containing PEG and starch
INVENTOR(S): Reslow, Mats; Joensson, Monica; Laakso, Timo
PATENT ASSIGNEE(S): Bioglan AB, Swed.
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002039985	A1	20020523	WO 2001-SE2166	20011005

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES,

FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

SE 2000004218	A	20020517	SE 2000-4218	20001116
SE 518008	C2	20020813		
AU 2001092527	A5	20020527	AU 2001-92527	20011005
US 2002081336	A1	20020627	US 2001-970649	20011005
EP 1333814	A1	20030813	EP 2001-972893	20011005

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:	SE 2000-4218	A	20001116
	US 2001-260496P	P	20010108
	WO 2001-SE2166	W	20011005

AB A process for producing microparticles contg. biol. active substance, in which process an aq. soln. of the said substance is prepd., this soln. is mixed with an aq. soln. of PEG such that the substance is concd. and/or solidified, the substance is optionally washed, the substance is mixed with an aq. starch soln., the compn. obtained is mixed, after the admixt. of the starch soln., with a polymer soln., thereby forming an emulsion of starch droplets in the polymer soln., the starch droplets are solidified into microparticles, the droplets are solidified into microparticles, the microparticles are dried and a release-controlling shell is optionally applied to these. A procedure for the prodn. of highly concd./pptd human growth hormone suitable for immobilization with PEG is given.

IT **9037-22-3**, Amylopectin
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(parenterally administrable **microparticles** contg. PEG and **starch**)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 9 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:400381 CAPLUS
DOCUMENT NUMBER: 136:406598
TITLE: **Gelling** agents containing polysaccharide benzoate ester
INVENTOR(S): Inagaki, Kazuya
PATENT ASSIGNEE(S): Chiba Seifun K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002155265	A2	20020528	JP 2000-353695	20001121

PRIORITY APPLN. INFO.:	JP 2000-353695		20001121

AB The invention relates to a gelling agent suitable for use in a cosmetic, pharmaceutical, paint, and ink compn., etc. for addn. of thixotropic viscosity in the compn., wherein the gelling agent contains polysaccharide benzoate ester having 0.1-3 benzoyl group substituted with OH per one mol. of the polysaccharide. A waxy corn starch benzoate was prepd., and combined with other ingredients at 10 % to obtain a nail enamel having thixotropic viscosity.

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IT **9037-22-3**, Waxy corn **starch**
RL: RCT (Reactant); RACT (Reactant or reagent)
(thixotropic **gelling** agents contg. polysaccharide benzoic acid ester)

L121 ANSWER 10 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:932378 CAPLUS
DOCUMENT NUMBER: 136:262246
TITLE: Structural properties in relation to oral **enzymatic** digestibility of **starch** **gels** based on pure **starch** components and high amylose content
AUTHOR(S): Vesterinen, Elina; Myllarinen, Paivi; Forssell, Pirkko; Soderling, Eva; Autio, Karin
CORPORATE SOURCE: VTT Biotechnology, FIN-02044, Finland
SOURCE: Food Hydrocolloids (2002), 16(2), 161-167
CODEN: FOHYES; ISSN: 0268-005X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The structure of different starch gels made of native high-amylose maize starch, purified amylose polymers and waxy-maize starch was studied using dynamic viscoelastic measurements. Starch gels with high-amylose content had the most rigid structure followed by pure amylose and amylopectin gels. The addn. of a high amt. of maltitol to the high-amylose starch dispersion before heating reduced the formation of networks. The enzymic digestibility of various starch gels was measured using both in vitro and in vivo methods. In 5 min .alpha.-amylase hydrolysis, the extent of degrdn. was decreased when the amylose concn. was increased in the amylose network and when maltitol syrup was added. Acid prodn. from starch gels was followed in vivo by monitoring pH changes in approximal plaque. The correlation between min. plaque pH and the extent of hydrolysis detd. in vitro was relatively good. The amt. of amylose in the network was not the factor that affected the extent of short-term oral enzymic degrdn. The more rigid the gel, the lower the extent of hydrolysis. However, even though high-amylose starch gels with a rigid structure were hydrolyzed to a minor extent in salivary .alpha.-amylase hydrolysis in vitro they did not induce any pH changes in human plaque.

IT **9037-22-3, Amylopectin**
RL: BSU (Biological study, unclassified); OCU (Occurrence, unclassified); BIOL (Biological study); OCCU (Occurrence)
(structural properties in relation to oral enzymic digestibility of **starch** gels based on pure **starch** components and high amylose content)

IT **9005-25-8, Starch**, properties
RL: PRP (Properties)
(structural properties in relation to oral enzymic digestibility of **starch** gels based on pure **starch** components and high amylose content)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 11 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:900769 CAPLUS
DOCUMENT NUMBER: 134:52257
TITLE: Expression in transgenic plants of **starch** binding domains and/or of protein fusions containing **starch** binding domains for production of amylose-free **starch**
INVENTOR(S): Visser, Richard Gerardus Franciscus; Vincken, Jean-paul
PATENT ASSIGNEE(S): Landbouwuniversiteit Wageningen, Neth.
SOURCE: PCT Int. Appl., 49 pp.

Searched by Barb O'Bryen, STIC 308-4291

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000077165	A2	20001221	WO 2000-NL406	20000613
WO 2000077165	A3	20010712		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2000057137	A5	20010102	AU 2000-57137	20000613
EP 1200552	A2	20020502	EP 2000-942529	20000613

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

PRIORITY APPLN. INFO.: EP 1999-201862 A 19990611
WO 2000-NL406 W 20000613

AB The invention relates to a method for expressing a desired protein or polypeptide in a plant, in which the protein or polypeptide is expressed as a fusion with at least one starch binding domain. The plant is preferably a plant that contains or produces starch or starch granules in at least one of its parts, such as potato, sweet potato, cassava, pea, taro, sago, yam, banana and/or cereals such as rice, maize, wheat and barley. The protein or polypeptide can be an enzyme, in particular an enzyme that can convert, modify, alter, degrade or otherwise influence starch (granules); or can be a receptor or a structural protein. The invention further relates to the fusions thus obtained, to genetic constructs that encode the above fusions and to plants transformed with said constructs. The method of the invention can in particular be used to provide modified starches and/or to provide complexes of starch (granules) and the above fusions. In another embodiment, one or more starch binding domains are expressed in a plant, to provide a plant producing modified starches. Preferred applications of the invention include prodn. of amylose-free starch, in particular amylose-free potato starch.

IT **9037-22-3P, Amylopectin**
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(extra heavily branched; expression in transgenic plants of **starch** binding domains and/or of protein fusions contg. **starch** binding domains for prodn. of amylose-free **starch**)

IT **9005-25-8P, Starch**, biological studies
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); PRP (Properties); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(modified, fusion with desired protein; expression in transgenic plants of **starch** binding domains and/or of protein fusions contg. **starch** binding domains for prodn. of amylose-free **starch**)

L121 ANSWER 12 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:98367 CAPLUS
DOCUMENT NUMBER: 128:129823
TITLE: Enzymic method for removing contaminants from ion

Searched by Barb O'Bryen, STIC 308-4291

exchange and fractionation resin
INVENTOR(S): Slade, John
PATENT ASSIGNEE(S): Novo Nordisk Biochem North America, Inc., USA
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9804344	A1	19980205	WO 1997-US12591	19970703
W: AL, AU, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9739601	A1	19980220	AU 1997-39601	19970703
EP 915734	A1	19990519	EP 1997-936972	19970703
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
CN 1226843	A	19990825	CN 1997-196893	19970703
JP 2000516709	T2	20001212	JP 1998-508890	19970703

PRIORITY APPLN. INFO.: US 1996-22867P P 19960730
WO 1997-US12591 W 19970703

AB An enzymic method is decribed for cleaning resins, particularly ion exchange and fractionation resins, used in prodn. of corn sweeteners such as corn syrup and high-fructose corn syrup. The method can be used alone to remove contaminants such as proteins, carbohydrates, lipids and residual unconverted starches from the resins, or in combination with chem. treatment, e.g., using HCl, NaOH or Na2CO3. Enzymes, including a protease, .beta.-glucanase, lipase, .alpha.-amylase and/or carbohydrase, are used for contaminant removal.

IT **9005-25-8, Starch**, processes **9037-22-3, Amylopectin**
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(enzymic method for removing contaminants from ion exchange and fractionation resins)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L121 ANSWER 13 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:723042 CAPLUS
DOCUMENT NUMBER: 123:110447
TITLE: Hydrocyclone procedure for **starch**-protein separation in laboratory wet milling
AUTHOR(S): Singh, N.; Eckhoff, S. R.
CORPORATE SOURCE: Department Agricultural Engineering, University Illinois, Urbana, IL, USA
SOURCE: Cereal Chemistry (1995), 72(4), 344-8
CODEN: CECHAF; ISSN: 0009-0352
PUBLISHER: American Association of Cereal Chemists
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A hydrocyclone system for starch-protein sepn. was developed for use with 1-kg samples in lab. corn wet milling. A Doxie 5 hydrocyclone with all but one cyclone plugged and five-pass starch washing system was compared to a traditional starch tabling procedure using both regular dent and waxy corn hybrids. The tabling procedure gave 3-4% higher starch yields in dent corn and 2-3% higher starch yields in waxy corn. Tabled starch had less protein (0.33 and 0.45% for dent and waxy, resp.) than the Doxie 5

hydrocyclone-sepd. starch (0.64 and 0.65% for dent and waxy, resp.). Using a Doxie Type A single hydrocyclone instead of the Doxie 5 increased the starch yield; however, protein in starch increased to 1.29 and 0.97% for dent and waxy, resp. Design and operational differences may account for the different results. The hydrocyclone procedure reduced the time required for starch-protein sepn. by 75%. It also eliminated the requirement of a large floor area for starch tables, reduced the potential for operator error, and more closely simulated the starch-protein sepn. process used in industrial operations. The reduced testing time and ease of use will make the hydrocyclone procedure useful for comparing milling procedures or different corn hybrids.

IT **9005-25-8P, Starch**, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(hydrocyclone procedure for **starch**-protein sepn. in lab. wet milling)

IT **9037-22-3P**, Waxy **starch**
RL: PUR (Purification or recovery); PREP (Preparation)
(hydrocyclone procedure for **starch**-protein sepn. in lab. wet milling of)

L121 ANSWER 14 OF 30 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN

ACCESSION NUMBER: 2001157294 EMBASE
TITLE: Amylopectin aggregation as a function of starch phosphate content studied by size exclusion chromatography and on-line refractive index and light scattering.
AUTHOR: Blennow A.; Mette Bay-Smidt A.; Bauer R.
CORPORATE SOURCE: A. Blennow, Plant Biochemistry Laboratory, Department of Plant Biology, Royal Veterinary/Agric. University, 40 Thorvaldsensvej, DK-1871 Frederiksberg C Copenhagen, Denmark. abl@kvl.dk
SOURCE: International Journal of Biological Macromolecules, (12 Jun 2001) 28/5 (409-420).
Refs: 59
ISSN: 0141-8130 CODEN: IJBMDR
PUBLISHER IDENT.: S 0141-8130(01)00133-7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Starches with a natural 65-fold span in covalently bound phosphate content were prepared from five different crops including sorghum, cassava, three potato varieties and an exotic ginger plant, Curcuma zedoaria, with extreme starch phosphate content. These starches were subjected to size exclusion chromatography with refractive index detection (SEC/RI). A simple and rapid method for starch solubilisation was used. The conditions during solubilisation (2 M NaOH) and separation (10 mM NaOH, 50.degree.C) were such as enabling >94% recovery of the starch without detectable degradation. The aggregation properties of the starch was investigated using on line refractive index/multi angle laser light scattering (RI/MALLS) detection. Three major regions in the SEC profile were identified, consisting of large amylopectin aggregates, amylopectin particles with radius of gyration (R(g)) of approx 200 nm (400 nm blocklets) and amylose. A procedure for correction of light scattering signals spread over the SEC profile as a result of aggregate tailing was developed. The significance of the relative amounts of these three molecular species on standard starch pasting parameters, as measured by a Rapid Visco Analyzer (RVA), was investigated. Starches with a high amount of amylopectin aggregates showed high peak viscosities. Moreover, very

high amounts of starch bound phosphate or amylose appears to suppress the content of large aggregates resulting in low viscosity. Copyright .COPYRGT. 2001 Elsevier Science B.V.

L121 ANSWER 15 OF 30 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1999035459 EMBASE
TITLE: Determination of the molecular mass of amylose.
AUTHOR: Suortti T.; Gorenstein M.V.; Roger P.
CORPORATE SOURCE: T. Suortti, VTT Biotechnology/Food Res., P.O. Box 1500, Fin-02044 VTT, Finland
SOURCE: Journal of Chromatography A, (1998) 828/1-2 (515-521). Refs: 19
ISSN: 0021-9673 CODEN: JCRAEY
PUBLISHER IDENT.: S 0021-9673(98)00831-0
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Normally the reliable determination of the molecular mass of amylose is a very tedious procedure requiring several days of sample preparation to remove contaminating amylopectin. In the method presented the detection of amylose is based on its selective detection by post-column colourization after size-separation chromatographic separation. The quantification of amylose is based on totally linear synthetic amylose thus targeting the analysis on the most important quality of amylose, long linear chains. The molecular mass of amylose, which was the main target could be analyzed by very simple sample preparation. Copyright (C) 1998 Elsevier Science B.V.

L121 ANSWER 16 OF 30 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1998301797 EMBASE
TITLE: Flocculation of cationic amylopectin starch and colloidal silicic acid. The effect of various kinds of salt.
AUTHOR: Larsson A.; Wall S.
CORPORATE SOURCE: S. Wall, Department of Physical Chemistry, Goteborg University, S-412 96 Goteborg, Sweden
SOURCE: Colloids and Surfaces A: Physicochemical and Engineering Aspects, (10 Aug 1998) 139/2 (259-270). Refs: 30
ISSN: 0927-7757 CODEN: CPEAEH
PUBLISHER IDENT.: S 0927-7757(98)00326-4
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The kinetics of the flocculation of nanosized silica particles (5 nm) with cationic amylopectin has been investigated with stopped-flow technique. The flocculation process has been followed with turbidity. A kinetic mechanism is suggested where the initial process is a bridging flocculation. In this process the large amylopectin, molecules gather a number of the small silica particles forming a polyelectrolyte complex. This process is followed by a collapse of the formed flocs. These processes have time constants of less than 1 s. In a subsequent process the polyelectrolyte complex may also flocculate on a larger time scale,

several seconds. The effect of mono- and divalent ions on the flocculation processes has been investigated. A large effect was found when a monovalent cation was replaced by a divalent cation indicating that the electrostatic screening of the silica particles is the most important factor.

L121 ANSWER 17 OF 30 EMBASE
on STN

ACCESSION NUMBER: 1998301786 EMBASE
TITLE: Crafted amylopectin: Applications in flocculation.
AUTHOR: Rath S.K.; Singh R.P.
CORPORATE SOURCE: R.P. Singh, Materials Science Centre, Indian Institute of Technology, Kharagpur 721302, India.
rps@matsc.iitkgp.ernet.in
SOURCE: Colloids and Surfaces A: Physicochemical and Engineering Aspects, (10 Aug 1998) 139/2 (129-135).
Refs: 18
ISSN: 0927-7757 CODEN: CPEAEH
PUBLISHER IDENT.: S 0927-7757(98)00250-7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
046 Environmental Health and Pollution Control
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Graft copolymers of amylopectin and polyacrylamide were synthesized using a eerie ion induced redox initiation technique. Flocculation characteristics of the graft copolymers were studied using two systems, one containing a synthetic effluent of kaolin clay (0.25% w/v) in distilled water, and the other containing a paper-mill white effluent. The results were compared with some of the commercially available flocculants. It was found that the performance of graft copolymers is on a par with most of the commercial flocculants tested, although one of them performed better. The synthetic parameters affecting the variation in the number and length of polyacrylamide chains in the graft copolymers are found to affect the flocculation behaviour. Aquaset (AS 510) is found to be a better flocculant for the white papermill effluent in comparison with the graft copolymers.

L121 ANSWER 18 OF 30 EMBASE
on STN

ACCESSION NUMBER: 94203978 EMBASE
DOCUMENT NUMBER: 1994203978
TITLE: Simultaneous determinations of the molecular weight distributions of amyloses and the fine structures of amylopectins of native starches.
AUTHOR: Ong M.H.; Jumel K.; Tokarczuk P.F.; Blanshard J.M.V.; Harding S.E.
CORPORATE SOURCE: Applied Biochem./Food Science Dept., Sutton Bonington Campus, University of Nottingham,Loughborough LE12 5RD, United Kingdom
SOURCE: Carbohydrate Research, (1994) 260/1 (99-117).
ISSN: 0008-6215 CODEN: CRBRAT
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Native A (wheat and waxy rice), B (potato), and C (cassava and sweet potato) types of starches were each debranched with isoamylase, and separated into amylose and amylopectin fractions by HPLC on size exclusion

Searched by Barb O'Bryen, STIC 308-4291

columns coupled on-line to multi-angle-laser-light-scattering and differential refractometer detectors. The absolute molecular weights of amyloses and chain length distributions of amylopectins were determined simultaneously, and pre- isolation of the amylopectin was not necessary. The molecular weights of debranched amylose from starches that have not been fractionated to separate amylose and amylopectin are significantly higher than published values for the undebranched fractionated amylose. The polymodal profiles of the refractive index chromatograms showed the complexity of the amylopectin structure of starches. The chain length distribution of amylopectin depends critically on the method for analysing the broad chromatogram when determined by either noting the minima/inflections or deconvoluting the overlapping amylopectin fraction into numerous normal/Gaussian distributions. Although the results from the former (conventional) method of analysis were comparable with the literature values, they did not appear to be as sensitive a technique for detecting differences as the multiple Gaussian approach. Overall, the study suggested that the amylopectin chain units might be more complex than originally envisaged and that different degrees of chain packing for the molecules can be inferred from this multiple component analysis.

L121 ANSWER 19 OF 30 EMBASE
on STN
ACCESSION NUMBER: 80077752 EMBASE
DOCUMENT NUMBER: 1980077752
TITLE: Catabolism of low-molecular-weight hydroxyethylated amylopectin in man. I. Changes in the circulating molecular composition.
AUTHOR: Mishler J.M.; Ricketts C.R.; Parkhouse E.J.; et al.
CORPORATE SOURCE: Med. Univ. Klin., Koln, Germany
SOURCE: Journal of Laboratory and Clinical Medicine, (1979) 94/6 (841-847).
CODEN: JLCMAK
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
029 Clinical Biochemistry
LANGUAGE: English

AB Intravascular persistence concomitant with changes in the circulating molecular composition were determined in sex fasted normal men dosed with 400 ml of 14% LMW-HES (a new plasma expander). The concentration of LMW-HES in serum fell to half its peak value in 3.9 .+-. 1.1 (S.D.) hr, whereas serum levels of glucose remained elevated throughout the 12 hr postinjection fasting period. The LMW-HES recovered from the intravascular space was shown by gel filtration on a column of Sepharose CL-4B to be of a narrower molecular size distribution (less polydispersion) than the injected material. The ratio of K(av) urine/K(av) injected solution was 1.34. At 30 min after injection, however, the ratio of K(av) urine/K(av) serum was 1.20, and by 24 hr, the value was 1.15. Overall, changes in the molecular distribution in the bloodstream between the end of the infusion period and 24 hr later were small. The results suggest that the intravascular catabolism of LMW-HES may occur in two distinct phases: a rapid initial degradation, followed by a more gradual elimination influenced by the MS of the injected material.

L121 ANSWER 20 OF 30 MEDLINE on STN
ACCESSION NUMBER: 80037725 MEDLINE
DOCUMENT NUMBER: 80037725 PubMed ID: 91262
TITLE: Transfusion of hydroxyethylated **amylopectin** -protected frozen blood in man. I. Plasma clearance and renal excretion of the cryoprotectant.
AUTHOR: Mishler J M; Parry E S
SOURCE: VOX SANGUINIS, (1979) 36 (6) 337-41.
Journal code: 0413606. ISSN: 0042-9007.

Searched by Barb O'Bryen, STIC 308-4291

PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197912
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19791220

AB In man following the autologous transfusion of blood previously frozen with 14% **low molecular weight** -hydroxyethylated **amylopectin** (cryo-HES), the clearance of this material from the intravascular space was compound, and appeared to consist of exponential components. The overall half-life -- however, was 10.6 +/- 3.0 (SD) h. Approximately 17% of the total infused cryo-HES was excreted in the urine 1 h postinjection, and 40% by 72 h. The erythrocyte sedimentation rate (ESR) was not affected by the presence of this substance in the bloodstream of the recipient. The results indicate that cryo-HES is removed rapidly following the transfusion of blood previously frozen with this material.

L121 ANSWER 21 OF 30 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1993-04156 DRUGU P T S
TITLE: **Pharmacology** of **Low Molecular Weight** Hydroxyethyl **Starches**.
AUTHOR: Baron J F
LOCATION: Paris, France
SOURCE: Ann.Fr.Anesth.Reanim. (11, No. 5, 509-15, 1992) 4 Fig. 43 Ref.
CODEN: AFAREO ISSN: 0750-7658
AVAIL. OF DOC.: Departement d'Anesthesie-Reanimation, Service du Professeur P. Viars, Hopital Pitie-Salpetriere, 47, Boulevard de l'Hopital, 75013 Paris, France.
LANGUAGE: French
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

AB The use of plasma substitutes is reviewed. **Low molecular weight** hydroxyethyl **starches** (IMW HES) are synthetic colloids closest to HSA whose use has grown, but are expensive. Dextrans may be used, but may induce allergies. Hydroxyethylation stabilizes **starches** and slows hydrolysis by alpha-amylase. The **pharmacokinetic** properties of HES are independent of molecular weight and directly related to molar substitution ratio. Of the 2 HES available in France, Elohes (6%) has a colloid-osmotic effect closest to plasma, induces an initial plasma volume expansion greater than that of the infused volume and has a long-lasting effect related to its molar substitution ratio. Lomol (10%) is hyperoncotic. Its initial effect is greater than Elohes, but it is eliminated more rapidly.

L121 ANSWER 22 OF 30 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1997-0302321 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 1997 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): **Endotoxin** reduction in macromolecular solutions : Two case studies
AUTHOR: HELD D. D.; MEHIGH R. J.; WOOGE C. H.; CRUMP S. P.; KAPPEL W. K.
CORPORATE SOURCE: Biochemistry R&D group, United States; Sigma Chemical Company, 3500 DeKalb Street, St. Louis, MO 63118, United States; R&D department at Sigma Chemical Company, United States

Searched by Barb O'Bryen, STIC 308-4291

SOURCE: Pharmaceutical technology, (1997), 21(4), 32-38 [4 p.], 19 refs.
ISSN: 0147-8087
DOCUMENT TYPE: Journal; (case report, clinical case)
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-18915, 354000064829060020

L121 ANSWER 23 OF 30 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2003:37297862 BIOTECHNO
TITLE: The molecular deposition of transgenically modified **starch** in the **starch** granule as imaged by functional microscopy
AUTHOR: Blennow A.; Hansen M.; Schulz A.; Jorgensen K.; Donald A.M.; Sanderson J.
CORPORATE SOURCE: A. Blennow, Ctr. for Molecular Plant Physiology, Department of Plant Biology, Roy. Vet./Agricultural University, 40 Thorvaldsensvej, DK-1871 Frederiksberg C, Copenhagen, Denmark.
E-mail: abl@kvl.dk
SOURCE: Journal of Structural Biology, (2003), 143/3 (229-241), 68 reference(s)
CODEN: JSBIEM ISSN: 1047-8477
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The molecular deposition of **starch** extracted from normal plants and transgenically modified potato lines was investigated using a combination of light microscopy, environmental scanning electron microscopy (ESEM) and confocal laser scanning microscopy (CLSM). ESEM permitted the detailed (10nm) topographical analysis of **starch** granules in their hydrated state. CLSM could reveal internal molar deposition patterns of **starch** molecules. This was achieved by equimolar labelling of each **starch** molecule using the aminofluorophore 8-amino-1,3,6-pyrenetrisulfonic acid (APTS). **Starch** extracted from tubers with low amylose contents (suppressed granule bound **starch** synthase, GBSS) showed very little APTS fluorescence and **starch** granules with **low molecular weight amylopectin** and/or high amylose contents showed high fluorescence. Growth ring structures were sharper in granules with normal or high amylose contents. High amylose granules showed a relatively even distribution in fluorescence while normal and low amylose granules had an intense fluorescence in the hilum indicating a high concentration of amylose in the centre of the granule. Antisense of the **starch** phosphorylating enzyme (GWD) resulted in **low molecular weight amylopectin** and small fissures in the granules. **Starch** granules with suppressed **starch** branching enzyme (SBE) had severe cracks and rough surfaces. Relationships between **starch** molecular structure, nano-scale crystalline arrangements and topographical-morphological features were estimated and discussed.

L121 ANSWER 24 OF 30 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2003:457832 BIOSIS
DOCUMENT NUMBER: PREV200300457832
TITLE: **Starch**.
AUTHOR(S): Gustavsson, Nils Ove [Inventor, Reprint Author]; Jonsson, Monica [Inventor]; Berden, Per [Inventor]; Laakso, Timo [Inventor]; Reslow, Mats [Inventor]
CORPORATE SOURCE: Loddekopinge, Sweden

ASSIGNEE: Jagotec AG, Muttenz, Switzerland
PATENT INFORMATION: US 6616948 September 09, 2003
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Sep 9 2003) Vol. 1274, No. 2. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133 (ISSN print).
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Oct 2003
Last Updated on STN: 1 Oct 2003

AB Production of purified, parenterally administrable **starch** by washing **starch** containing more than 85% **amylopectin** in order to remove surface-localized proteins, lipids and endotoxins, subjecting the **starch** to a **molecular weight reduction** by acid hydrolysis, and optionally removing residual water-soluble proteins. Purified **starch** and **microparticles** based on such **starch**.

L121 ANSWER 25 OF 30 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1999:39487 BIOSIS
DOCUMENT NUMBER: PREV199900039487
TITLE: Oligosaccharide dehydrogenase-catalyzed assay for the determination of polysaccharides.
AUTHOR(S): Nilsson, Gunilla S. [Reprint author]; Andersson, Mats; Ruzgas, Tautgirdas; Gorton, Lo
CORPORATE SOURCE: Dep. Analytical Chem., Lund Univ., P.O. Box 124, S-221 00 Lund, Sweden
SOURCE: Analytical Biochemistry, (Dec. 1, 1998) Vol. 265, No. 1, pp. 151-156. print. CODEN: ANBCA2. ISSN: 0003-2697.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Feb 1999
Last Updated on STN: 3 Feb 1999

AB Oligosaccharide dehydrogenase (ODH), an enzyme known to have a broad selectivity for reducing sugars of **low molecular weight**, was investigated to determine its catalytic properties with larger polysaccharides. Six substrates were studied: pullulan standards with molecular weights of between 5,400 and 90,900, debranched **starch**, and dextran. In addition, maltotriose, isomaltotriose, maltose, and glucose were used as substrates for comparison. ODH catalyzed the oxidation of the large pullulans with a degree of polymerization of at least 560. Isomaltotriose and dextran were not oxidized. ODH activity for the pullulans, expressed as the rate constant Kps, was only three times lower than that for maltose. When the oxidation of sugars with ODH was coupled to a color-forming reaction, quantitative spectrophotometric determination of sugars was possible using either Meldola's blue or N-methylphenazinium as electron acceptors in combination with nitrotetrazolium blue. Linear calibration curves for maltose, maltotriose, and debranched **starch** were obtained using this ODH method and compared with curves from the conventional spectrophotometric copper sulfate method. This work demonstrates that ODH can be advantageously used for the determination of polysaccharides.

L121 ANSWER 26 OF 30 TOXCENTER COPYRIGHT 2004 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2002:89994 TOXCENTER
COPYRIGHT: Copyright 2004 ACS
DOCUMENT NUMBER: CA13619296466U
TITLE: Forming purified starch and microparticles with controlled release of a biologically active substance
AUTHOR(S): Gustafsson, Nils Ove; Berden, Per; Joensson, Monica; Laakso, Timo; Reslow, Mats
CORPORATE SOURCE: ASSIGNEE: Bioglan AB

Searched by Barb O'Bryen, STIC 308-4291

PATENT INFORMATION: WO 2002028909 A1 11 Apr 2002
SOURCE: (2002) PCT Int. Appl., 42 pp.
CODEN: PIXXD2.
COUNTRY: SWEDEN
DOCUMENT TYPE: Patent
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2002:276035
LANGUAGE: English
ENTRY DATE: Entered STN: 20020416
Last Updated on STN: 20021105

AB Prodn. of purified, parenterally administrable starch by washing starch contg. >85% **amylopectin** to remove surface-localized proteins, lipids and **endotoxins**, subjecting the starch to a mol. wt. redn. by acid hydrolysis, and optionally removing residual water-sol. proteins.

L121 ANSWER 27 OF 30 TOXCENTER COPYRIGHT 2004 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 2002:89993 TOXCENTER
COPYRIGHT: Copyright 2004 ACS
DOCUMENT NUMBER: CA13619296465T
TITLE: **Pharmaceutically** acceptable starch
AUTHOR(S): Gustavsson, Nils Ove; Berden, Per; Joensson, Monica; Laakso, Timo; Reslow, Mats
CORPORATE SOURCE: ASSIGNEE: Bioglan AB
PATENT INFORMATION: WO 2002028908 A1 11 Apr 2002
SOURCE: (2002) PCT Int. Appl., 43 pp.
CODEN: PIXXD2.
COUNTRY: SWEDEN
DOCUMENT TYPE: Patent
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2002:276034
LANGUAGE: English
ENTRY DATE: Entered STN: 20020416
Last Updated on STN: 20021105

AB Prodn. of purified, parenterally administrable starch is accomplished by washing starch contg. more than 85% **amylopectin** in order to remove surface-localized proteins, lipids and **endotoxins**, dissolving the starch in aq. medium, mol. wt. redn. by shearing, and optionally removal of residual water-sol. proteins, preferably by anion exchange chromatog.

L121 ANSWER 28 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2000-681105 [67] WPIDS
DOC. NO. CPI: C2000-207282
TITLE: Compositions to deliver compounds into cells e.g. to treat rheumatoid arthritis, comprise organic halide, targeting ligand and nuclear localization sequence in combination with compound and carrier.
DERWENT CLASS: A96 B07 D16
INVENTOR(S): MCCREERY, T; SADEWASSER, D A; UNGER, E C
PATENT ASSIGNEE(S): (IMAR-N) IMARX PHARM CORP
COUNTRY COUNT: 25
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 1046394	A2	20001025	(200067)*	EN	78

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

EP 1046394 A2 EP 2000-303249 20000418

PRIORITY APPLN. INFO: US 1999-294623 19990419
AB EP 1046394 A UPAB: 20001223
NOVELTY - Compositions for delivering compounds into cells comprise: an organic halide; a targeting ligand; and a nuclear localization sequence in combination with the compound to be delivered.
ACTIVITY - Immunoregulatory; anti-inflammatory; anti-arthritic.
USE - The compositions are used to deliver compounds into cells (claimed), particularly for the treatment of autoimmune disorders and inflammatory conditions such as rheumatoid arthritis. They may also be used to deliver **pharmaceuticals**, **drugs**, diagnostic agents, synthetic organic molecules, peptides, proteins, vitamins, steroids, genetic materials and other bioactive agents e.g. mitotic inhibitors (vinca alkaloids), radiopharmaceuticals (radioactive iodine, phosphorus and cobalt isotopes), hormones (progestins, estrogens, anti-estrogens), anthelmintics, antimalarials, antituberculotics, biologicals (immune sera, antitoxins, antivenoms), rabies prophylactic products, bacterial vaccines, viral vaccines, aminoglycosides, respiratory products (xanthine derivatives, theophylline, aminophylline), thyroid therapeutics (iodine salts, antithyroid agents), cardiovascular products (chelating agents, mercurial diuretics, cardiac glycosides), glucagons, blood products (parenteral iron, hemin, hematoporphyrins and derivatives), targeting ligands (peptides, antibodies, antibody fragments), biological response modifiers (muramyl dipeptide, muramyl tripeptide, microbial cell wall components, lymphokines - bacterial **endotoxin** e.g. lipopolysaccharide and macrophage activation factor), subunits of bacteria (Mycobacteria, Comebacteria), synthetic dipeptides (N-acetyl-muramyl-L-alanyl-D-isoglutamine), antifungals (ketoconazole, nystatin, griseofulvin, flucytosine, miconazole, amphotericin B), toxins (ricin), immunosuppressants (cyclosporins), antibiotics (beta -lactam, sulfazecin), hormones (growth hormone, melanocyte-stimulating hormone, estradiol, beclomethasone dipropionate, betamethasone, betamethasone acetate, betamethasone sodium phosphate, betamethasone disodium phosphate, cortisone acetate, dexamethasone, dexamethasone acetate, dexamethasone sodium phosphate, flunisolide, hydrocortisone, hydrocortisone acetate, hydrocortisone cypionate, hydrocortisone sodium phosphate, hydrocortisone sodium succinate, methylprednisolone, methylprednisolone acetate, methylprednisolone sodium succinate, paramethasone acetate, prednisolone acetate, prednisolone sodium phosphate, prednisolone tebutate, prednisone, triamcinolone, triamcinolone acetonide, triamcinolone diacetate, triamcinolone hexacetonide, fluorocortisone acetate, oxytocin, vasopressin and their derivatives), vitamins (cyanocobalamin neionic acid), retinoids and their derivatives (retinal palmitate, alpha -tocopheryl), peptides and enzymes (manganese superoxide dismutase, alkaline phosphatases), anti-allergens (amelexanox), anticoagulants (phenprocoumon, heparin), tissue plasminogen activators, streptokinase and urokinase), circulatory **drugs** (propranolol), metabolic potentiators (glutathione), antibiotics (p-aminosalicylic acid, isoniazid, capreomycin sulfate, cycloserine, ethambutol hydrochloride, ethionamide, pyrazinamide, rifampicin, streptomycin sulfate dapsone, chloramphenicol, neomycin, ceflacor, cefadroxil, cephalexin, cephadrine erythromycin, clindamycin, lincomycin, amoxicillin, ampicillin, bacampicillin, carbenicillin, dicloxicillin, cyclacillin, picloxicillin, hetacillin, methicillin, nafcillin, oxacillin, penicillin (G and V), ticarcillin, rifampin, tetracycline), antivirals (acyclovir, ddI, foscarnet, zidovudine, ribavirin, vidarabine monohydrate), antianginals (diltiazem, nifedipine, verapamil, erythritol tetranitrate, isosorbide dinitrate, nitroglycerin (glyceryl trinitrate), pentaerythritol tetranitrate, anti-inflammatories (difluisal, ibuprofen, indomethacin, meclofenamate, mefenamic acid, naproxen, oxyphenbutazone, phenylbutazone, piroxicam, sulindac, tolmetin, aspirin, salicylates), antiprotozoans (chloraquine, hydroxychloraquine,

metronidazole, quinine, meglumine antimonate), antirheumatics (penicillamine), narcotics (paregoric), opiates (codeine, heroin, methadone, morphine, opium), cardiac glycosides (deslanoside, digitoxin, digoxin, digitalin, digitalis), neuromuscular blockers (atracurium mesylate, gallamine triethiodide, hexafluorenium bromide, metrocurine iodide, pancurium bromide, succinylcholine chloride (suxamethionium chloride), tubocurarine chloride, vencuronium bromide), sedatives (amobarbital, amobarbital sodium, aprobarbital, butabarbital sodium, chloral hydrate, ethchlorvynol, ethinamate, flurazepam hydrochloride, glutethimide, methotrimeprazine hydrochloride, methyprylon, midazolam hydrochloride, paraldehyde, pentobarbital, pentobarbital sodium, secobarbital sodium, thiopental sodium), antineoplastics (methotrexate, fluorouracil, adriamycin, mitomycin, ansamitomycin, bleomycin, cysteine arabinoside, arabinosyl adenine, mercaptopolylysine, vincristine, busulfan, chlorambucil, azidothymidine, melphalan (e.g. PAM, L-PAM or phenylalanine mustard), mercaptopurine, mitotane, procarbazine hydrochloride, dactinomycin (actinomycin D), daunorubicin hydrochloride, dosorubicin hydrochloride, Taxol (RTM: paclitaxel), plicamycin (mithramycin), aminoglutethimide, estramustine phosphate sodium, flutamide, leuprolide acetate, megestrol acetate, tamoxifen citrate, testolactone, trilostane, amsacrine (m-AMSA), asparaginase, etoposide (VP-16), interferon alpha -2a, interferon alpha -2b, teniposide (VM-26), vinblastine sulfate (VLB), vincristine sulfate, hydroxyurea, procarbaxine or dacarbazine).

ADVANTAGE - The compositions provide improved delivery of compositions including **drugs** and genetic materials into cells. They provide for specific targeting and delivery of compounds to particular cells and increased targeting to the nuclei of targeted cells. They also allow delivery to cell lines that would be otherwise resistant to intracellular delivery and gene expression using other conventional means.

DESCRIPTION OF DRAWING(S) - Schematic representation of a targeted composition.

targeted composition 1
lipid coating 2
lipids 2A
halocarbon gas or liquid 3
genetic material 4
targeting ligand 5
lipid head group 6
tether 7
tether 7A
nuclear localization sequence 8
condensing agent. 9

Dwg.2/2

L121 ANSWER 29 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1994-200692 [25] WPIDS
DOC. NO. CPI: C1994-091753
TITLE: Prepn. of high **mol. wt., low** dextrose equiv. maltodextrin - by hydrolysing **starch** contg. **amylopectin** with amylolytic enzyme, used as bulking agents, carriers and film forming agents in food applications.
DERWENT CLASS: D13 D16 D17
INVENTOR(S): BRUMM, P J
PATENT ASSIGNEE(S): (ENZY-N) ENZYME BIO SYSTEMS LTD
COUNTRY COUNT: 8
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
AU 9350323	A	19940512	(199425)*		23

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CA 2109368	A	19940429	(199428)	
JP 06209784	A	19940802	(199435)	7
NZ 250048	A	19941026	(199442)	
ZA 9308067	A	19941130	(199502)	22
AU 665122	B	19951214	(199606)	
US 5612202	A	19970318	(199717)	5
US 5886168	A	19990323	(199919)	
TW 354756	A	19990321	(199932)	
MX 196569	B	20000523	(200129)	
CA 2109368	C	20010501	(200131)	EN

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
AU 9350323	A		AU 1993-50323	19931027
CA 2109368	A		CA 1993-2109368	19931027
JP 06209784	A		JP 1993-270846	19931028
NZ 250048	A		NZ 1993-250048	19931026
ZA 9308067	A		ZA 1993-8067	19931028
AU 665122	B		AU 1993-50323	19931027
US 5612202	A	Cont of	US 1992-967762	19921028
			US 1994-262399	19940620
US 5886168	A	Cont of	US 1992-967762	19921028
		Div ex	US 1994-262399	19940620
			US 1997-786697	19970122
TW 354756	A		TW 1993-108963	19931027
MX 196569	B		MX 1993-6734	19931028
CA 2109368	C		CA 1993-2109368	19931027

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 665122	B	Previous Publ.	AU 9350323
US 5886168	A	Div ex	US 5612202

PRIORITY APPLN. INFO: US 1992-967762 19921028; US 1994-262399 19940620; US 1997-786697 19970122

AB AU 9350323 A UPAB: 19940810

Prodn. of a high molecular wt. maltodextrin having branched molecules and a D.E. (dextrose equivalent) of less than 8 comprises: (a) treating an aq. slurry of an **amylopectin**-contg. **starch** with an amylolytic enzyme at an elevated temp. to cause non-random cleavage of the **starch**; (b) inactivating the enzyme; (c) removing insoluble materials to make a clarified liquefact; and (d) sepg. the high molecular wt. maltodextrin having a molecular wt. of 20,000-50,000 daltons from the clarified liquefact.

A high **molecular wt.**, **low** D.E. **starch** conversion prod. derived from an **amylopectin** -contg. **starch** comprises a maltodextrin having branched molecules with (alpha 1,6) linkages, a molecular wt. of 20,000-50,000 daltons and a D.E. of less than 8.

USE/ADVANTAGE - Low D.E. **starch** hydrolysates are useful for a variety of food applications e.g. as bulking agents, carriers, film-forming agents and encapsulating agents. Edible prods. for human or animal consumption and **pharmaceutical** prods. contg. the maltodextrin of the invention are claimed. The hydrolysates of the invention have lower colour, higher clarity and cleaner taste than currently available low D.E. hydrolysates and could be used in new applications e.g. stable, low D.E. syrups.

Dwg.0/0

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L121 ANSWER 30 OF 30 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1993-118338 [15] WPIDS
DOC. NO. CPI: C1993-052567
TITLE: Prodn. of improved **starch** degradation products - useful e.g. as plasma substitute comprises ultra-sound treatment of native **starch** or hydrolysed **starch** in aq. medium.
DERWENT CLASS: A96 B04
INVENTOR(S): NITSCH, E
PATENT ASSIGNEE(S): (LAEV) LAEVOSAN GMBH & CO KG; (LAEV) LAEVOSAN GMBH H
COUNTRY COUNT: 42
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 4132701	A1	19930408	(199315)*		7
WO 9307177	A1	19930415	(199316)	GE	33
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA SE					
W: AT AU BB BG BR CA CH CS DE DK ES FI GB HU JP KP KR LK LU MG MN MW NL NO PL RO RU SD SE UA US					
AU 9226491	A	19930503	(199334)		
PT 100918	A	19931130	(199351)		
FI 9401532	A	19940331	(199422)		
NO 9401012	A	19940321	(199423)		
EP 606332	A1	19940720	(199428)	GE	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL SE					
SK 9400369	A3	19941005	(199444)		
JP 06511273	W	19941215	(199509)		
HU 66891	T	19950130	(199510)		
CZ 9400760	A3	19950215	(199514)		
US 5424302	A	19950613	(199529)		15

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 4132701	A1	DE 1991-4132701	19911001
WO 9307177	A1	WO 1992-EP2229	19920928
AU 9226491	A	AU 1992-26491	19920928
PT 100918	A	PT 1992-100918	19921001
FI 9401532	A	WO 1992-EP2229	19920928
		FI 1994-1532	19940331
NO 9401012	A	WO 1992-EP2229	19920928
		NO 1994-1012	19940321
EP 606332	A1	EP 1992-920694	19920928
		WO 1992-EP2229	19920928
SK 9400369	A3	WO 1992-EP2229	19920928
		SK 1994-369	19940328
JP 06511273	W	WO 1992-EP2229	19920928
		JP 1993-506588	19920928
HU 66891	T	WO 1992-EP2229	19920928
		HU 1994-944	19920928
CZ 9400760	A3	CZ 1994-760	19920928
US 5424302	A	US 1994-220499	19940331

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9226491	A	Based on	WO 9307177
EP 606332	A1	Based on	WO 9307177
JP 06511273	W	Based on	WO 9307177
HU 66891	T	Based on	WO 9307177

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PRIORITY APPLN. INFO: DE 1991-4132701 19911001
AB DE 4132701 A UPAB: 19931115
Prodn. of **starch** degradation prods. (A) having a narrow mol.wt. distribution comprises subjecting an aq. dispersion, suspension or soln. of a native **starch** (Ia) or deriv. (Ib) or a partially hydrolysed **starch** (Ic) or deriv. (Id) to ultrasound.

(Ia) pref. consists mainly of **amylopectin** and is esp. corn, rice or sorghum **starch**. (Ib) is pref. hydroxyethylstarch. (Ic) and (Id) are pref. obtd. from (Ia) or (Ib) by acidic hydrolysis, esp. using HCl, or enzymatic hydroysis, esp. using alpha-amylase, and pref. has an average mol.wt. above 106 Dalton.

USE/ADVANTAGE - (A) are used for the mfr. of **pharmaceutical** compsns., esp. for peritoneal dialysis, and of blood plasma substitutes. The method gives (A) in yields of about 100% yield, which are better than those obtd. in the acid degradation process known from US3523939 and the enzymatic degradation process known from DE3313600, and avoids the formation of **low mol.wt.** prods. which occur in these processes. Further, it can be used for plant scale prodn., unlike the known mechanical degradation process
Dwg.0/10

FILE 'HOME' ENTERED AT 11:27:00 ON 15 JAN 2004

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